

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-300713

(43)Date of publication of application : 21.10.2003

(51)Int.Cl.

C01B 31/02

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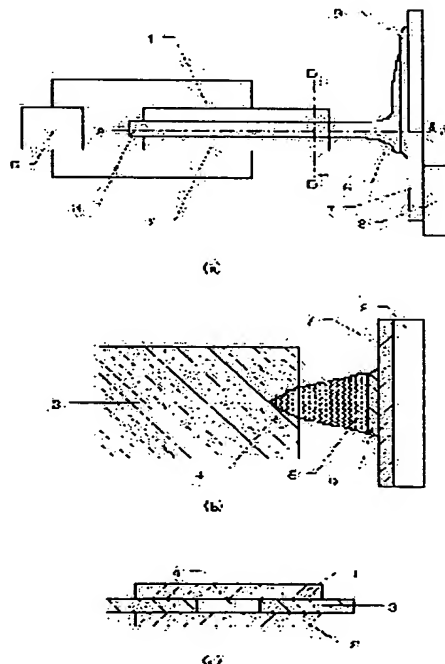
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(54) METHOD AND APPARATUS FOR MANUFACTURING CARBON NANO- FINE PARTICLE, AND SINGLE-WALL CARBON NANOTUBE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a method for manufacturing a carbon nano-fine particle including a carbon nanomaterial such as a carbon nanohorn and an extra-short single-wall carbon nanotube, and a manufacturing apparatus for the particle.

SOLUTION: A graphite cathode 1 and a graphite anode 2 are oppositely arranged across an insulating plate 3 having a notched part 4 on a part thereof. Arc discharge is generated in the notched part 4 of the insulating plate 3 by applying voltage between both electrodes. A prescribed zone of the graphite anode 2 is evaporated by electrode point of the arc discharge and an arc jet 5 is formed from the notched part 4. As a result, the carbon nanoparticle composed of soot 9 of the carbon nanomaterial including the carbon nanohorn is generated. The soot 9 is deposited on a recovering plate 7 to be recovered.



[19] 中华人民共和国国家知识产权局

[51] Int. Cl<sup>7</sup>

C01B 31/02

C23C 16/26 C23C 16/50



# [12] 发明专利申请公开说明书

[21] 申请号 03142909.2

[43] 公开日 2003 年 11 月 19 日

[11] 公开号 CN 1456497A

[22] 申请日 2003.4.5 [21] 申请号 03142909.2

[30] 优先权

[32] 2002. 4. 5 [33] JP [31] 103825/2002

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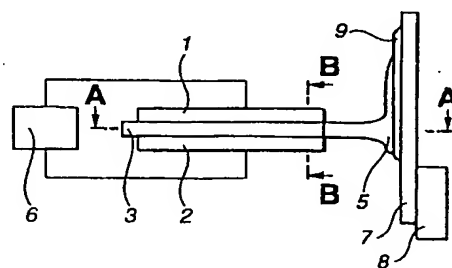
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权利要求书 2 页 说明书 20 页 附图 14 页

[54] 发明名称 制备碳纳米细颗粒的方法和装置及  
单层碳纳米管

[57] 摘要

提供一种制备碳纳米细颗粒的方法和装置，能够容易且廉价地制备含有约 20% 及以上的碳纳米角细颗粒的碳纳米细颗粒。该方法包括：彼此相对放置一石墨电极(1)和一石墨阳极(2)，中间放置一具有凹槽(4)的绝缘板(3)；一电压被施加在两电极之间，从绝缘板(3)的凹槽(4)处产生电弧放电；石墨阳极(2)的给定区域从电弧放电的一个电极点处被蒸发，同时从凹槽(4)处产生电弧喷射物(5)；因此，产生包括碳黑(9)的碳纳米颗粒，碳黑(9)是包含碳纳米角的碳纳米材料，碳黑(9)被沉积到一回收板(7)上并被回收。还提供一种单层碳纳米管。



ISSN 1000-8427 4